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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/009,858	12/22/2001	Bernhard Raaf	112740-344	6325
29177	7590	04/06/2006	EXAMINER	
BELL, BOYD & LLOYD, LLC P. O. BOX 1135 CHICAGO, IL 60690-1135			SAMS, MATTHEW C	
			ART UNIT	PAPER NUMBER
			2617	

DATE MAILED: 04/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/009,858	<b>Applicant(s)</b> RAAF, BERNHARD	
	<b>Examiner</b> Matthew C. Sams	<b>Art Unit</b> 2617	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 January 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 25-48 is/are pending in the application.
- 4a) Of the above claim(s) 33, 44 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 25-32, 34-43 and 45-48 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Amendment***

1. This office action has been changed in response to the amendment filed on 1/23/2006.
2. Claims 33 and 44 have been canceled.
3. The Art Unit location of your application in the USPTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Art Unit 2617.

### ***Claim Objections***

4. Claims 34, 35, 45 and 46 are objected to because of the following informalities: the objected claims depend upon canceled claims. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 25, 27-32, 34-37, 40-43 and 45-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gilhousen et al. (US-5,603,096 hereafter, Gilhousen) in view of Gilhousen et al. (US-5,280,472) and Davis et al. (US-4,518,961 hereafter, Davis).

Regarding claim 25, Gilhousen teaches a method for controlling the transmission power in a radio system by evaluating a signal received by a receiver via the transmission channel, producing power control information as a function of the evaluation, sending the power control information embedded in a time slot structure to the transmitter, and setting the transmission power in the transmitter as a function of the power control information. (Col. 2 line 64 through Col. 3 line 63) Gilhousen differs from the claimed invention by not explicitly reciting a coding in the receiver for power control information in a time slot, with redundancy, with further data to be transmitted in the same one time slot to form a common data word, with at least one bit value in the data word depending on the power control information and on the further data and transmitting the power control information to the transmitter.

In an analogous art, Gilhousen et al. teaches coding in the receiver for power control information in a frame (Col. 24 lines 42-45), with redundancy (Col. 15 lines 26-36), with further data to be transmitted in the same one time slot to form a common data block (Col. 22 lines 17-40 and Col. 27 lines 17-21), with at least one bit value in the data word depending on the power control information and on the further data and transmitting the information to the transmitter. (Col. 15 lines 9-36 and Col. 27 lines 17-21) Gilhousen et al. teaches power control bits are inserted at the output of the convolutional interleaver (Col. 22 lines 27-29), block encoded and Walsh encoded prior to transmission. (Col. 27 lines 17-21) At the time the invention was made, it would have been obvious to one of ordinary skill in the art to implement the power control system of Gilhousen after modifying it to incorporate coding of power control information in a receiver of Gilhousen et al. One of ordinary skill in the art would have been

motivated to do this since power adjustments can be made during communication transmissions.

Gilhousen in view of Gilhousen et al. differs from the claimed invention by not explicitly reciting that during the coding process, at least one bit in the coded data word is assigned a value which corresponds to a logic operation between the power control information and the further data to be transmitted.

In an analogous art, Davis teaches a coding format selection means for identifying predetermined sequences of the transmitted message in order to identify how to decode the message. (Col. 48 line 67 through Col. 49 line 34) At the time the invention was made, it would have been obvious to one of ordinary skill in the art to implement the power control method of Gilhousen in view of Gilhousen et al. after modifying it to incorporate the encoding of the type of encoding of the message of Davis. One of ordinary skill in the art would have been motivated to do this since encoding the type of coding used into the transmitted message allows for changing the type of encoding used if the system has been compromised or decoding different types of schemes from different service providers. (Col. 3 lines 31-53)

Regarding claim 27, Gilhousen in view of Gilhousen et al. and Davis teaches a method of controlling the transmission power in a radio system including further data that is user data. (Col. 5 lines 41-49)

Regarding claim 28, Gilhousen in view of Gilhousen et al. and Davis teaches power control information that is transmitted in binary form. (Gilhousen Col. 9 line 16-17)

Regarding claim 29, Gilhousen in view of Gilhousen et al. and Davis teaches a method of transmission power control in a radio system where the bits in the power control information are coded with bits of the further data to form a common binary data word. (Gilhousen Col. 2 line 64 through Col. 3 line 3)

Regarding claim 30, Gilhousen in view of Gilhousen et al. and Davis teaches a method of controlling transmission power in a radio system, wherein the coded data word includes a plurality of a sum of bits in the power control information and the bits in the further data. (Gilhousen Col. 2 lines 17-63)

Regarding claim 31, Gilhousen in view of Gilhousen et al. and Davis teaches a method of controlling transmission power in a radio system where during the coding process, at least one bit in the coded data word is assigned a value of the power control information to be transmitted in the corresponding time slot. (Gilhousen Col. 2 line 40 through Col. 3 line 3)

Regarding claim 32, Gilhousen in view of Gilhousen et al. and Davis teaches a method of controlling transmission power in a radio system where during the coding process, one bit in the coded data word is assigned a value of the information to be transmitted in the one time slot from the further data. (Gilhousen Col. 3 lines 48-63)  
Gilhousen in view of Gilhousen et al. and Davis teaches power control bits are inserted at the output of the convolutional interleaver (Gilhousen et al. Col. 22 lines 27-29), block encoded and Walsh encoded prior to transmission. (Gilhousen et al. Col. 27 lines 17-21)

Regarding claim 34, Gilhousen in view of Gilhousen et al. and Davis teach a logic exclusive-or operation as a logic operation. (Gilhousen – Col. 2 lines 17-47 & Davis Fig. 8 [140])

Regarding claim 35, Gilhousen in view of Gilhousen et al. and Davis teaches a power control bit that is recovered during decoding by the transceiver that has the power control information. (Gilhousen Col. 2 line 64 through Col. 3 line 63)

Regarding claim 36, Gilhousen in view of Gilhousen et al. and Davis teaches a method of controlling transmission power in a radio system where the receiver is a base station and produces the coded power control information. (Gilhousen Col. 3 lines 48-63) Gilhousen teaches the transmitter which receives the power control information and sets the transmission level appropriately is a mobile station. (Gilhousen Col. 3 lines 48-63)

Regarding claim 37, Gilhousen teaches a radio system that includes control for the transmission power in a radio system by evaluating a signal received by a receiver via the transmission channel, producing power control information as a function of the evaluation, sending the power control information embedded in a time slot structure to the transmitter, and setting the transmission power in the transmitter as a function of the power control information. (Col. 2 line 64 through Col. 3 line 63) Gilhousen differs from the claimed invention by not explicitly reciting a coding in the receiver for power control information in a time slot, with redundancy, with further data to be transmitted in the same one time slot to form a common data word, with at least one bit value in the data word depending on the power control information and on the further data and transmitting the power control information to the transmitter.

In an analogous art, Gilhousen et al. teaches coding in the receiver for power control information in a frame (Col. 24 lines 42-45), with redundancy (Col. 15 lines 26-36), with further data to be transmitted in the same one time slot to form a common data block (Col. 22 lines 17-40 and Col. 27 lines 17-21), with at least one bit value in the data word depending on the power control information and on the further data and transmitting the information to the transmitter. (Col. 15 lines 9-36 and Col. 27 lines 17-21) Gilhousen et al. teaches power control bits are inserted at the output of the convolutional interleaver (Col. 22 lines 27-29), block encoded and Walsh encoded prior to transmission. (Col. 27 lines 17-21) At the time the invention was made, it would have been obvious to one of ordinary skill in the art to implement the power control system of Gilhousen after modifying it to incorporate coding of power control information in a receiver of Gilhousen et al. One of ordinary skill in the art would have been motivated to do this since power adjustments can be made during communication transmissions.

Gilhousen in view of Gilhousen et al. differs from the claimed invention by not explicitly reciting that during the coding process, at least one bit in the coded data word is assigned a value which corresponds to a logic operation between the power control information and the further data to be transmitted.

In an analogous art, Davis teaches a coding format selection means for identifying predetermined sequences of the transmitted message in order to identify how to decode the message. (Col. 48 line 67 through Col. 49 line 34) At the time the invention was made, it would have been obvious to one of ordinary skill in the art to implement the power control method of Gilhousen in view of Gilhousen et al. after



modifying it to incorporate the encoding of the type of encoding of the message of Davis. One of ordinary skill in the art would have been motivated to do this since encoding the type of coding used into the transmitted message allows for changing the type of encoding used if the system has been compromised or decoding different types of schemes from different service providers. (Col. 3 lines 31-53)

Regarding claim 40, the limitations of claim 40 are rejected as the same reason set forth above in claim 28.

Regarding claim 41, the limitations of claim 41 are rejected as the same reason set forth above in claim 29.

Regarding claim 42, the limitations of claim 42 are rejected as the same reason set forth above in claim 31.

Regarding claim 43, the limitations of claim 43 are rejected as the same reason set forth above in claim 32.

Regarding claim 45, the limitations of claim 45 are rejected as the same reason set forth above in claim 34.

Regarding claim 46, the limitations of claim 46 are rejected as the same reason set forth above in claim 35.

Regarding claim 47, Gilhousen teaches a radio system as a CDMA mobile radio system. (Col. 1 58-61)

Regarding claim 48, the limitations of claim 48 are rejected as the same reason set forth above in claim 36.

7. Claims 26, 38 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gilhousen in view of Gilhousen et al. and Davis as applied to claims 25 and 37 above, further in view of Takayama et al. (US-5,982,294 hereinafter, Takayama).

Regarding claim 26, Gilhousen in view of Gilhousen et al. and Davis teaches a method of controlling transmission power in the radio system as stated in claim 25, but differs from the claimed invention by not explicitly reciting that further data is format identification information.

In an analogous art, Takayama teaches a communication protocol that includes data for format identification information. (Fig. 4 [401] and Col. 14 lines 23-51) At the time the invention was made, it would have been obvious to one of ordinary skill in the art to incorporate the data format of Takayama into the method of controlling transmission power of the radio system of Gilhousen in view of Gilhousen et al. and Davis because transmitting format identification information allows the receiver to recognize the synchronization pattern of the transmitter. (Col. 14 lines 23-49)

Regarding claim 38, the limitations of claim 38 are rejected as the same reason set forth in claim 26.

Regarding claim 39, Gilhousen teaches a receiver that codes the power control information together with user data for the same time slot. (Col. 2 lines 31-39)

### ***Response to Arguments***

8. Applicant's arguments with respect to claims 25-48 have been considered but are moot in view of the new ground(s) of rejection.

**Conclusion**

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US-5,812,938 to Gilhousen et al. regarding cyclic redundancy checking code, power control commands encoded into frames and error correcting control for CDMA.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew C. Sams whose telephone number is (571)272-8099. The examiner can normally be reached on M-F 7:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester Kincaid can be reached on (571)272-7922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MCS  
3/31/2006

  
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